

INTERNET DOCUMENT INFORMATION FORM

A. :Report Title: Building a Ready Force for the 21st Century

B. DATE Report Downloaded From the Internet 18 Mar 98

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): The Under Secretary of Defense for Acquisition and Technology

D. Currently Applicable Classification Level: Unclassified

E The foregoing information was compiled and provided by:
DTIC-OCA, Initials: PM **Preparation Date:** 18 Mar 98

DIST- A

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"Building a Ready Force for the 21st Century"

**Address of
The Under Secretary of Defense for Acquisition and Technology
Honorable Paul G. Kaminski**

**to the
1996 AUSA Symposium
Orlando, FL**

February 13, 1996

It's a great pleasure to be with you and share my views on where the Department of Defense is headed to affordably modernize America's defenses for the coming century.

"Affordable modernization" is not an oxymoron. . . the Department does have a plan for building a ready force for the 21st Century.

By the year 2000, we plan for the modernization accounts to go up to \$67 billion in current dollars -- almost twice what it was in the fiscal '96 budget submitted to Congress. And this modernization plan will focus on building a ready, flexible, responsive force for the changing security environment in which we live.

That means we will continue to maintain technological supremacy on the battlefield, especially by seizing on breathtaking advances in information technology: advanced semiconductors, computers, software and communication systems. We will maintain strong emphasis on missile defense and put greater emphasis on controlling the ownership costs of our systems and on fast transportation and mobility. . . airlift, sealift, groundlift and trucks.

Our future years modernization plan reflects these priorities. But I must be candid with you. We are making three critical assumptions about where we will get the money to make this work. The first of these assumptions is that the Department's top line will remain as planned. The second is that we will achieve significant savings by closing bases. I could spend the rest of this talk discussing either of these assumptions.

Today, I wish to spend the remainder of my time with you on the third big assumption. . . our defense planning and budget are based upon the assumption that we will get significant savings by overhauling our defense acquisition system and become more efficient in what we buy; how we buy it; and how we oversee that buying process.

TEAM NEW ZEALAND

Let me begin by sharing an acquisition success story... no, a mission success story with you. It's the story of Team New Zealand -- the America's Cup sailing team who defeated Team Dennis Connor five races to zero with overwhelming margins in each race. Historically, teams from large countries have leveraged their nations' manufacturing bases and technological resources to dominate the competition. So how did a team from a small country such as New Zealand triumph in a sport driven by advanced technology?

Team New Zealand gained a competitive advantage by reinventing the yacht design process. Much like the acquisition programs in the Department of Defense, they needed to meet extremely demanding schedules, work within a constrained budget, and deliver superior performance. The analysis and optimization of yacht design has traditionally relied upon the testing of scale models in water towing tanks and wind tunnels. Each test requires the construction of a new, precisely machined prototype, and the testing itself can take weeks.

Unlike the larger America's Cup competitors, Team New Zealand did not have corporate sponsorship to obtain ready access to expensive wind tunnels, towing tanks, or supercomputers. Instead, Team New Zealand used less expensive workstations to create and drive its own simulation-based process of design, analyze, test, feedback, and redesign. Moreover, by locating its computer network at the team's sailing facility, they were able to tightly integrate the designers, testers and sailing crew in a cohesive team.

As many as several hundred simulation designs were analyzed each night. The next morning, they chose the two best for a component and had them manufactured in the machine shop next door, installed on two identical boats, and raced to test which performed better. With the aid of the simulation they isolated which factors helped the winning boat go faster and which ones slowed the loser down. The designers, testers, and sailing crew worked side by side to perform about 10,000 simulated iterations over a two month period. By doing so they created a superior capability, affordably and in less time than their competitors.

What are some of the conclusions that one can draw from the Team New Zealand reinvention success story? The most important is the bottom line... for me it's the undeniable fact that Team New Zealand *created a superior capability, affordably and in less time than their competitors*. When you stop to think about it -- that's our bottom line too!

The job of the defense acquisition system is to put equipment that is affordable and second-to-none in the hands of America's warfighters as quickly as possible. If we fail, the stakes are a lot higher... instead of losing a yacht race, Americans could lose their

lives in battle.

As I look at the defense acquisition system in detail, what I find is that the system is not broken--it fields equipment that is second-to-none. What I find is that the system can and must operate much more efficiently.

WHAT WE BUY

Let me take the "what we buy" piece first. It's my sense that "what we buy" is far more important determinant of what will be affordable than "how we buy." I see a very important role here for the Army's Training & Doctrine Command and the operational user.

America is changing the way it fights. We are seeing a big shift in emphasis towards enhancing the performance of delivery platforms--ships, aircraft, and tanks--with off board information and highly lethal, extremely accurate weapons. We received an inkling of what combat will look like in the 21st century during Desert Storm and more recently in our support of NATO action in Bosnia. We now have unmanned aerial vehicles which have demonstrated the ability to provide continuous real-time battlefield surveillance.

We have employed weapons with great precision -- the bomb damage assessment photographs in Bosnia bear no resemblance to BDA photos of past where the target... often undamaged... is surrounded by craters. The Bosnia BDA photos show one crater where the target used to be and virtually no collateral damage. We are moving to a situation of one target, one weapon. This has been the promise for the past 20 years, now it has become a reality.

The Department is moving forward on a wide range of new information based technologies to improve battlefield situational awareness and shorten the time it takes U.S. commanders to bring effective force to bear on an objective. As a result, the Department will not need to implement a one-for-one platform replacement or "recapitalization" of current inventories.

The key point here is that the Department is pursuing a system-of-systems "modernization" strategy in which we will be fielding fewer, but more capable systems. The key question is: Can the Department afford such a modernization approach? Under this approach, system complexity will continue to increase--dramatically in many cases.

Norm Augustine pointed out some years ago that the cost of each successive generation of fighter aircraft was increasing geometrically. As a result, although fighter aircraft were becoming more and more capable, the United States could afford

fewer and fewer of them. Augustine's projection—an extrapolation of aircraft unit cost as a function of deployment date--was that by some time in the middle of the next century the United States would only be able to afford one fearsomely sophisticated aircraft and the military services would each take turns flying it!

The key point to remember is that Augustine's prediction is empirical. It is based upon extrapolation--our past experience and processes--for handling the interplay of increasingly complex technologies. We--industry and the DoD--clearly need to find an alternate path to field affordable, modern systems.

We need to take a harder look at our approach to sustainment and logistics. For existing systems, logistics costs need to be reduced through business process improvements and technology insertion. To provide a better set of incentives, the FY 1997 budget will contain a fund, capitalized in the DBOF, to finance the up front investments needed to make engineering and sparing changes to reduce operations and support costs.

On new systems, life cycle costs need to be treated as an independent variable--something that is consciously considered up front in the design process and given an "equal place at the table" along with system performance.

The Department's senior leadership is strongly committed to greater use of modeling and simulation to help guide our "what to buy" decisions, especially models that incorporate sound physics-based underpinnings. This is another major conclusion one can draw from the Team New Zealand success story... they integrated modeling and simulation into their whole acquisition process. With such models, we can actually eliminate certain tests and improve operational training.

HOW WE BUY

This leads me to the "how we buy" piece. A central issue here is how do we reduce "acquisition cycle time" to maintain the technological superiority of our combat forces.

The Department of Defense can not afford a 15-year acquisition cycle time when the comparable commercial turnover is every 3-4 years, and in some cases 1-2 years. Without a doubt, our number one priority must be to shorten the cycle time for developing new weapon systems or inserting new technology into existing systems.

Although more legislative relief will help, the principal problems are not statutory or regulatory. There is considerable freedom in our acquisition statutes and regulations. The issue is really cultural.

We have set up a structure that discourages risk taking--it settles for very, very conservative performance at all levels. We are moving now to adjust that culture. The first change we made was to stop required use of military specifications--those reams of documents that spelled out in meticulous detail how contractors must design and produce a system of supplies and services. It was "safe" to specify conformance to military specifications (MILSPECs) and standards (MIL STDS).

Instead, we are going to be using commercial and performance standards. We have effectively turned our procurement system on its head. A program manager in the past had to get a waiver in order to use commercial and performance standards. Now the reverse is true. If a program manager wants to use military specifications, then he or she has to get a waiver in order to justify the extra cost entailed in military specs.

These acquisition reform initiatives are being implemented as new contracts are negotiated. I have just signed a "single process" policy to use best commercial practices through out a contractor's facility... it makes no sense to use best commercial practices on new contracts and maintain a separate set of procedures for existing DoD contracts. We are seeking to use, the same inspection procedures on military production lines that are used for commercial lines... for example, abandoning the MIL-Q-9858A quality control standard in favor of standards like ISO 9000, used by companies world-wide.

The Army in general... and the PEO for Tactical Missile Systems in particular... are responding well to this initiative. There have been at least 40-50 companies or divisions of companies that are moving forward with this initiative. DCMC has already received several concept papers from industry for conversion of major facilities to common processes.

We are looking at our own internal acquisition processes within the Department. We are beginning to achieve real success in implementing a bold, new, reengineered oversight and review process... one based upon integrated product teams... that will better serve our warfighters and conserve public funds. In this way, oversight is part of the solution--not part of the problem. As a result, the cycle time for acquisition decision memorandums has come down from 23 days in 1994 to 1.5 days in 1995. Over half the DABs scheduled in 1995 were not held--they were not needed.

The DoD 5000 series directives are now being revised to define an acquisition environment that makes DoD a smarter, more responsive buyer of the best goods and services, that meet our war fighter's needs, at the best dollar value over the life of the product.

The rewrite will take us from a very detailed, centralized management approach that was widely perceived as inflexible and overly bureaucratic, to a set of more flexible

policies and procedures that emphasize the use of professional judgment and common sense to streamline the acquisition process.

Earlier, I spoke of some visible progress in acquisition reform. One measure of success is the downward trend in the breach status of our major acquisition programs. Two years ago, during the first six months of calendar year 1994, more than 25 percent of our major programs were breeching their acquisition program baselines. Today, about 10 percent of our programs are breaching their APBs. Better program stability and shorter acquisition cycle times results in lower overall costs and savings that can be directly applied to other modernization programs.

SUMMARY

In summary, our success in fielding superior systems will depend in part upon our success in implementing lasting acquisition reforms in what we buy; how we buy it; and how we oversee that buying process.

We are in the process of making the most revolutionary change in the defense acquisition system in the past 50 years. The true measure of our success will be acceptance in the field--not policy pronouncements in Washington DC.

Together we have an opportunity to not just talk about why; but to learn how and to do something for America's warfighters and the American taxpayer.

Our bottom line is to succeed as Team New Zealand did--to field a superior capability, affordably and in less time than our potential adversaries.

Thank you all.